The results already published tempt one sorely to estimate a provisional parallax. Indeed there is no need to resist the temptation if one keeps the results to oneself, and avoids multiplying provisional results in print which only make confusion. An excellent example of reticence has already been set. This much may be said from experience; if anyone indulges himself by studying the results in the tenth circular, he will find no reason to be dissatisfied with the accuracy of the work.

The circular concludes with 100 pages of tables for facilitating the photographic reductions. Such tables may be thrown into an endless variety of forms according to individual taste; and the differences between any two particular arrangements are not of much importance compared with the great advantage of having the tables published. The thanks of everyone who measures photographs are due to M. Lœwy for his tables in the tenth circular. H. H. Turner.

NOTES.

When it was announced, a few months ago, that Prof. von Neumayer, the distinguished meteorologist, was about to retire, on account of advanced age and ill-health, from his post of director of the German Naval Observatory at Hamburg, which was under his control for a considerable number of years, the rumour quickly gained currency in usually well-informed circles that his successor would not be a man of science but a naval officer. This rumour was discredited at the time by many people, but it proves to have been quite correct, for during the Kaiser's recent visit to Hamburg for the purpose of unveiling a statue to the Emperor William I., he summoned Captain Herz, of the Imperial Navy, to his presence, and informed him that he had been appointed to the vacant post with the rank of a Rear-Admiral. As the work of the observatory is necessarily so largely scientific, it may at first sight seem strange that a man, who, no matter how able he may be, is not a man of science, should be placed at its head. A similar arrangement, however, has been made in several other cases in recent years—as, for instance, in the construction department of the Navy, which until quite recently was under the supervision of scientific engineers, but is now in the hands of naval officers—and the explanation given is that a man of science in such a position is so overburdened with administrative work—for which, very possibly, he is not well fitted—that he has little or no time for scientific investigation. The naval authorities have, therefore, decided to utilise their investigators wholly for scientific purposes, and to place the work of organisation and administration into the hands of a naval officer who is a man of practical affairs.

A bust of the late Sir William Flower, F.R.S., will be formally presented to the trustees of the British Museum by the "Flower Memorial Committee" on Saturday next, July 25. The ceremony will take place in the central hall of the Natural History Museum at 1.15 p.m. The bust will be unveiled by the Archbishop of Canterbury as the representative of the trustees of the museum.

Prof. W. J. McGee has been elected chairman, and Dr. J. H. McCormick secretary, of the committee of arrangements for the eighth International Geographical Congress to be held at Washington, D.C., in September of next year.

A few weeks ago we recorded the unveiling of a monument of Pasteur at Chartres. We learn from the *British Medical Journal* that on July 12 another monument was unveiled in the commune of Marnes-la-Coquette in the presence of many well-known men of science. It was in the district of Marnes-la-Coquette that Pasteur established his laboratory for the study of hydrophobia, and it was there that he died.

The seventy-first annual meeting of the British Medical Association will be held at Swansea on July 28–31, under the presidency of Dr. T. D. Griffiths. After the delivery of the presidential address on July 28, the Stewart prize will be presented to Dr. F. W. Mott, F.R.S. Dr. F. T. Roberts will deliver an address in medicine, and Prof. A. W. Mayo Robson an address in surgery. The scientific work of the meeting will be conducted in eleven sections—medicine, surgery, obstetrics and gynæcology, State medicine, psychology, pathology, ophthalmology, diseases of children, laryngology, tropical diseases; Navy, Army, and ambulance.

The Wilts Archæological Society held a meeting at Stonehenge on Friday last, and the Rev. E. H. Goddard gave an account of the raising of the leaning stone. Mr. Story Maskelyne, in thanking Sir Edmund Antrobus for his invitation to visit Stonehenge, said that, by raising the leaning stone, the biggest stone of its kind in England, one of the most important pieces of archæological work he had known had been accomplished. People might quarrel about barbed-wire fences and rights of way, but in his opinion the greatest public right in Stonehenge was the preservation of the monument, and that the present owner was doing to the best of his abilities.

The long excursion of the Geologists' Association will be made from July 28 to August 4. The head-quarters will be at Berwick-on-Tweed, and in the course of the week the coast at Scremerston, Burnmouth, Eyemouth, and St. Abb's Head, and the country inland along the Whiteadder, the Eildon Hills and Melrose, and a portion of the Cheviot Hills will be visited. Silurian, Old Red Sandstone, Lower Carboniferous, various igneous rocks and glacial drifts will be examined under the direction of Mr. J. G. Goodchild, with Mr. R. S. Herries as excursion secretary.

The death is announced of Mr. J. Peter Lesley, who from 1872 to 1878 was professor of geology and Dean of the Faculty of Science in the University of Pennsylvania, and was recognised in America as one of the most competent experts on coal and iron mining. From an obituary notice in *Science* (July 3) we learn that he was born in Philadelphia on September 17, 1819, and after graduating at the university in 1838, served on the first geological survey of the State, when he paid especial attention to the coal-deposits. On the abrupt termination of the survey in 1841 he passed through a course of theology, was licensed to preach in 1844, and was for some years pastor of a Congregational church at Milton, Mass. His views, however, underwent some changes, and returning to Philadelphia he again took up geological work, making elaborate surveys of several coal and iron fields in different States. For twenty-seven years he was secretary and librarian of the American Philosophical Society, part of the time holding the geological professorship in Pennsylvania, and in 1874 taking charge also of the second geological survey of the State. This last post he retained until 1893, when he retired to Milton. He died on June 1.

A severe earthquake was felt throughout the island of St. Vincent on the morning of July 21.

We have received the official *Protokoll* of the third meeting of the International "Commission" for Scientific Aëronautics, which was held in Berlin on May 20–25, 1902.

The meeting was attended not only by the members of the "commission," but also by a large number of delegates from various countries interested in aëronautical investigation. A report of the proceedings has already appeared in this Journal (vol. lxvii. p. 137, December 11, 1902). The opening address by Prof. Hergesell, president of the commission, gives a very lucid summary of the work already attempted in the investigation of the upper atmosphere by international cooperation, and of the general results achieved.

THE scientific balloon ascents on June 4 were made in broad northerly air-current, which covered nearly the whole of Europe. At Itteville (Paris) the balloon rose to 12,840 metres; the temperature at 10,490 metres was −52° 6 C.; at starting 9°·3. At Zürich, an altitude of 15,750 metres was reached, minimum temperature, −66°·5; at starting, 10°·2. At Berlin, a temperature of −53°·0 was recorded at 11,500 metres; at starting, 10°·2. At Vienna, −43°·7 was registered at 9500 metres; temperature at starting, 15°·8. At Pavlovsk, a kite rose to 4430 metres in the afternoon of June 3, temperature −11°·6; on the ground, 23°·0. A balloon sent up from Bath rose to about 14,000 metres; it descended in the sea, and the record is not published.

DURING the past week thunderstorms have been prevalent in various parts of the United Kingdom. In the early morning of Saturday last, a sharp storm occurred in the neighbourhood of London, and rainfall exceeding one inch and a half was measured; another storm occurred in the afternoon of that day, and further heavy rainfall occurred in parts of the metropolis. On Sunday severe storms were experienced in the southern counties; in parts of those districts the roads were under water for some time, and much damage was done to crops. The barometer readings were, for several days, generally low and uniform over the whole country, and although the weather has seemed to be "close," the thermometer has been low for the season, the day readings being at times as much as 10° below the average.

DR. D. K. MORRIS, writing in the June number of the *University of Birmingham Engineering Journal*, gives an interesting description of the power transmission installation from St. Maurice to Lausanne. The installation is for the transmission of 5000 h.p. over a distance of 35 miles, and the chief interest in the scheme lies in the fact that high tension direct currents are used in place of alternating or three-phase currents. The choice of this system has enabled a much greater simplicity in switching gear to be attained without any loss in efficiency, which is stated to be as high as 94 per cent. The system is a constant current one, 150 amperes at all loads, the voltage varying with the power transmitted, and reaching a maximum of 22,300 volts. The generators at the St. Maurice power station are designed to generate 150 amperes at about 2000 volts, and are connected in series, more machines being put in circuit as the load rises. The high voltage involves very special precautions in the insulation not only of the machine windings, but also of the machines themselves. The windings are very carefully insulated in the ordinary way, and, in addition, all the active parts of the armature are separated from the support by micanite insulation; the machines are insulated from earth by heavy porcelain insulators in which the lower ends of the foundation bolts rest. The journal contains several other interesting contributions from the pens of students and others, and affords ample evidence of the flourishing condition of the engineering school at the university.

AN interesting and rare case of infection of the mouth and subcutaneous tissues by a parasitic nematode worm is recorded by Mr. Whittles (*Lancet*, May 23). The patient had never been out of England, and the source of infection was surmised to be a pet Pomeranian dog. In a tropical disease affecting the skin, known as "craw-craw," a nematode has been described by Mr. O'Neil (possibly *Filaria perstans*), and the *bilharzia* may cause papillomatous growths.

AN interesting and exhaustive report has been issued by the Worcestershire County Council upon the bacterial treatment of sewage by different methods, the analytical details being supplied by the county analyst, Mr. Cecil Duncan. The conclusion arrived at is that the best method for the treatment of domestic sewage is a closed septic tank with bacterial beds filled with coke, which was found to be better than coal, brick or stone, two bacterial beds being provided to be used alternately to avoid ponding. As regards fish-tests of effluents, it is remarked that the Salmonidæ require a larger quantity of oxygen than the Cyprinidæ. Mr. Duncan gives details of the methods of analysis used, and suggests several modifications of those usually employed. For preparing ammonia-free water for analytical processes he has found that boiling ordinary distilled water with bromine-water (1200c.c. and three drops) for a few minutes is a rapid and trustworthy expedient.

THE first edition of the Kew hand-list of the Coniferæ has been exhausted for some time, and the authorities have published a new edition, which brings up to date the catalogue of species now in cultivation in the gardens. The revision has been undertaken by Dr. Masters, who was also responsible for the first edition. There is a considerable increase in the number of varieties, but only a very slight addition of fresh species.

THE necessity for adopting a uniform system of nomenclature in botany is sufficiently obvious, but at present this desirable condition has not been attained. In the presidential address delivered before the Linnean Society of New South Wales, Mr. J. H. Maiden presents a good summary of the codes which have been drawn up with this object, and enumerates the chief difficulties which confront the systematist.

INSTANCES of the disappearance of uncommon or interesting plants in the neighbourhood of towns are unfortunately only too frequent, so that the gift of a small but particularly rich piece of land, presented by Mr. Willett to the Ashmolean Natural History Society of Oxfordshire, will appeal to all naturalists. The donor desired to perpetuate the name of his famous fellow-collegian, and suggested that the area should be known as the "Ruskin Plot." The unique character of the vegetation is due to the presence of oolite overlying the clay, and these provide the situation required by a number of orchids and sedges. Mr. G. C. Druce, who selected the spot, describes in a small pamphlet the interesting plants which are collected together.

WRITING in the Lombardy *Rendiconti*, Prof. A. Martinazzoli urges the desirability of initiating anthropological observations in the Italian elementary and other schools. In view of the fact that hitherto nothing had been done in that direction, it is to be regarded as an indication of progress that during the last year about six anthropometric laboratories were fitted up in Italy, but it will be a long time before, from this small beginning, results are reached comparable with those achieved in the United States.

THE June number of *Biometrika* contains an interesting contribution to the discussion on Mendel's theory of inheritance by Prof. Weldon, in which further difficulties are put forward against the acceptance of the laws as interpreted and amended by Mr. Bateson. Mr. Darbishire gives, in the same number, his third record of the hybrids between waltzing mice and albinos, and Mr. Woods an account of his experiments in breeding rabbits as bearing upon the principles of the same theory. Among other interesting papers there will be found what appear to be preliminary attempts on the part of Mr. Geoffrey Smith to determine the mass relations of nucleus and cytoplasm in Actinosphærium, and of Dr. Warren to determine the relationship between the size of the cell and the size of the body in Daphnia. Further work in this very interesting but difficult field of research is much needed.

THE North American representatives of the widely spread group of diminutive ants, known as Leptothorax, are revised by Mr. W. M. Wheeler in the *Proceedings* of the Philadelphia Academy (pp. 215 *et seq*). The small size and concealed position of the colonies of these ants (which in general contain only from 25 to 50 individuals) account to a great extent for our imperfect knowledge of the group.

IN the June number of the *American Naturalist* Prof. B. Dean records partial and complete albinism, as well as polychromatism, in the hag-fishes. Since one species of the group is thus proved to possess a definite type of coloration, it is inferred that myxinoids, as a whole, can scarcely differ in this respect from true fishes, in which deep-sea forms are uniformly coloured, while shallow water types are variegated. Hence follows the further inference that the few existing forms are survivors of a once numerous tribe. Later on in the same issue Mr. C. J. Herrick discusses the sense-organs in the skin of fishes, and concludes that those species which possess terminal nerve-buds in the lateral line system of the outer skin detect and taste their food by means of these organs, while those which lack these structures in the skin have the sense of taste confined to the mouth.

AN extremely suggestive and interesting paper by Dr. Lewkowitsch, dealing with problems in the fat industry, appears in the *Journal* of the Society of Chemical Industry, vol. xxii. No. 10. The author is of the opinion that a fresh wave of inventive activity is approaching in the various branches of the fat industry, and in his paper points out a series of problems which await solution at the present moment. Industries having for their object the refining of fats and oils, industries in which the glycerides undergo a chemical change but are not saponified, and those industries based on the saponification of fats and oils, are all dealt with in the paper.

THE additions to the Zoological Society's Gardens during the past week include a Sooty Mangabey (*Cercocebus fuliginosus*), a Black Hornbill (*Sphagolobus atratus*) from West Africa, presented by Mr. T. Wright; two Arabian Gazelles (*Gazella arabica*) from Sheik Osman, Arabia, presented by Messrs. Wheatley and Glossop, R.N.; a Brazilian Tapir (*Tapirus americanus*) from South America, an Amazonian Manatee (*Manatus inunguis*) from the River Amazon, presented by Mr. Charles Booth; a Grey Squirrel (*Sciurus cinereus*) from North America, presented by the Lady Kintore; a Campbell's Monkey (*Cercopithecus campbelli*) from West Africa, a White Stork (*Ciconia alba*), European, deposited.

OUR ASTRONOMICAL COLUMN.

BRIGHT SPOTS ON SATURN.—Mr. W. F. Denning sends us the following approximate times of transit of two bright spots across the central meridian of Saturn, and the times of rising and southing of the planet during the next fortnight:—

1903	Spot "A" h. m.	Spot "B" h. m.	Saturn Rises h. m.	Saturn Souths h. m.
July 25	10 37	—	8 5	12 25
,, 26	—	14 18	8 1	12 21
,, 27	13 47	10 43	7 57	12 17
,, 28	10 12	—	7 53	12 13
,, 29	—	13 53	7 49	12 8
,, 30	13 22	10 18	7 45	12 4
,, 31	9 47	—	7 41	12 0
Aug. 1	—	13 28	7 36	11 56
,, 2	12 57	9 53	7 32	11 52
,, 3	9 22	—	7 28	11 47
,, 4	—	13 3	7 24	11 43
,, 5	12 32	9 28	7 20	11 39
,, 6	8 57	—	7 16	11 35
,, 7	—	12 38	7 12	11 31
,, 8	12 7	9 3	7 8	11 26
,, 10	—	12 13	7 0	11 18

The spots are separated by about three hours (=108°) of longitude, and are conspicuous objects when the planet is well defined.

SPECTROSCOPIC OBSERVATIONS OF NOVA GEMINORUM.—Photographs obtained in April by Prof. Perrine, using the Crossley reflector, show that, despite its reddish colour, the light from Nova Geminorum was rich in actinic rays. They do not show any trace of nebulosity around the star such as was obtained in the case of Nova Persei.

Spectrograms obtained with the small slitless spectroscope attached to the Crossley reflector, show that in the region photographed—$H\beta$ to λ 335—the spectrum somewhat resembles that obtained by Messrs. Wright and Campbell for Nova Persei in April, 1901, and consists of bright lines and bands superposed on a continuous spectrum; these lines are almost all accounted for by the hydrogen lines in that region. $H\epsilon$ and $H\zeta$, as well as the lines at λ 339 and λ 346, were the strongest lines in Nova Persei, but they are very weak in the recent Nova, whereas $H\beta$ and $H\delta$ are strong in the latter but very weak in the former spectrum; the chief nebular line, λ 501, which was conspicuous in the spectrum of Nova Persei, is not shown in these spectrograms of Nova Geminorum. These differences may be due to the different stages of development of the two stars.

A comparison of two spectrograms obtained on April 2 and 8 respectively, show a considerable alteration in the six days interval, particularly in the ultra-violet region, where the continuous spectrum became weaker and the bands at $\lambda\lambda$ 350, 374 and 384 consequently appeared stronger; λ 339 and λ 346 also appeared to have developed. $H\beta$ appeared weaker, and there was a faint condensation in the region of λ 501. This condensation appeared as a fairly well-marked line on a later photograph obtained on May 11. Visual observations showed a strong $H\alpha$ line and a condensation in the region about D_1 and D_2.

An ordinary photograph exposed on April 22, 23 and 24 for 6h. 29m. showed no trace of nebulosity around the Nova.

Reproductions of these region photographs and spectrograms, and a detailed account of the visual and photographic observations of Profs. Reese and Curtis accompany Prof. Aitken's article in Lick *Bulletin*, No. 37.

MEASUREMENT OF THE INTENSITY OF FEEBLE ILLUMINATIONS.—M. Touchet, of Paris, has devised an apparatus for measuring the intensities of such feeble illuminations as the Zodiacal Light and the Gegenschein. It is similar in appearance to a theodolite, but has a flame of constant illuminating power so arranged as to illuminate the field through a variable slit. This slit may be opened and closed, like the slit of an ordinary spectroscope, by a screw having a divided head, so that the intensity of the field illumination may be instantly made equal to that of the light it is desired to measure, and readings, which are reducible to a standard, thus obtained (*Bulletin de la Société Astronomique de France*, July).